

## Claims

1. A light control film having a rough surface pattern; wherein in any cross section perpendicular to the base plane of the film, the average of absolute values of slope ( $\theta_{ave}$  (degree) ) of a curve along the edge of the cross section contoured by the rough surface pattern (hereinafter a profile curve) to said base plane is  $20^\circ$  or higher and  $75^\circ$  or lower for substantially all cross sections.
2. A light control film having a rough surface patterned layer comprising material of a refraction index  $n$ , wherein in any cross section perpendicular to the base plane of the film, the average of absolute values of slope ( $\theta_{ave}$  (degree) ) of a curve along the edge of the cross section contoured by the rough surface pattern (hereinafter a profile curve) to said base plane is  $(78-34n)$  degree or higher and  $(118-34n)$  degree or lower for substantially all cross sections.
3. A light control film according to claim 1 or claim 2, wherein difference in said average of absolute values of slopes due to difference of directions of the cross sections including a profile curve is within 30 degree.
4. A light control film having a rough surface pattern, wherein in any cross section perpendicular to the base plane of the film, the average of absolute values of slope ( $\theta_{ave}$  (degree) ) of a curve along the edge of the cross section contoured by the rough surface pattern (hereinafter a profile curve) to said base plane and the

ratio ( $L_r=L_2/L_1$ ) of the length ( $L_2$ ) of said profile curve to the length ( $L_1$ ) of a straight line defined by the intersection of said base plane and the cross section satisfy the following Formula (1) or Formula (2).

$$\theta_{ave} + L_r \geq 20 \quad (1)$$

$$25 \leq \theta_{ave} \times L_r \leq 60 \quad (2)$$

5. A light control film having a rough surface patterned layer comprising a material with a refraction index  $n$ , wherein in any cross section perpendicular to the base plane of the film, the average of absolute values of slope ( $\theta_{ave}$  (degree) ) of a curve along the edge of the cross section contoured by the rough surface pattern (hereinafter a profile curve) to said base plane and the ratio ( $L_r=L_2/L_1$ ) of the length ( $L_2$ ) of said profile curve to the length ( $L_1$ ) of a straight line defined by the intersection of said base plane and the cross section satisfy the following Formula (3) or Formula (4).

$$\theta_{ave} + L_r \times n^2 \geq 40 \quad (3)$$

$$50 \leq \theta_{ave} \times L_r \times n^2 \leq 135 \quad (4)$$

6. A light control film according to any one of claims 1 to 5, wherein the average of absolute values of slope ( $\theta_{ave}$ ) of said profile curve increases gradually from the first direction in which the direction of cross section is parallel with the base plane of said light control film towards the second direction in which the direction of cross section is parallel with the base plane of said light control film and perpendicular to said first direction.

7. A light control film according to any one of claims 1 to 6, wherein slopes of said profile curve (rough surface pattern) to the base plane increases or decreases gradually from one end towards another end of the film.

8. A light control film according to any one of claims 1 to 7, wherein said light control film is used in a backlight and, when a profile curve on a cross section almost orthogonally crossing a longitudinal direction of the light source of said backlight is divided with a certain interval and the average of absolute values of slope of the inclining surface on the light source side of said profile curve is calculated for each interval, said average of absolute values of slope increases towards the light source.

9. A light control film according to any one of claims 1 to 7, wherein said light control film is used in a backlight, and when a profile curve on a cross section almost orthogonally crossing a longitudinal direction of the light source of said backlight is divided with a certain interval and the average of absolute values of slope of the inclining surface on the opposite side to said light source of said profile curve is calculated for each interval, said average of absolute values of slope decreases towards the light source.

10. A backlight device comprising a light guiding plate equipped with a light source at least on one end and having a light emergent

surface almost orthogonally crossing said one end, and a light control film located on the light emergent surface of said light guiding plate, wherein said light control film is a light control film according to any one of claims 1 to 9.

11. A backlight device according to Claim 10, wherein the light control film according to Claim 6 is located so that the first direction is parallel to the one end of the light guiding plate where the light source is located.

12. A backlight device comprising a light control film, and a light diffusing material and a light source in this order, said light source being located at the surface opposite to the light emergent surface of said light control film, wherein a light control film according to one of claims 1 - 9 is used as said light control film.